

ABSTRACT OF THE DISCLOSURE

[00172] The present invention provides methods and compositions for protecting against cataract development during and after a vitreous replacement, and for treating cataracts in a subject. The methods include using, for vitreous replacement in a vitrectomy, a vitreous replacement solution having a lower oxygen concentration than an air-saturated vitreous replacement solution. The compositions include low-oxygen-concentration vitreous replacement solutions, which may comprise reduced glutathione and/or ascorbic acid. Also provided are methods of using the compositions, during a vitreous replacement or vitrectomy, to protect against cataract development in a subject.

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